

REMARKS

Claims 1-17 were previously pending in this application. By this amendment, Applicants cancel claim 4 without prejudice or disclaimer. Claim 1 has been amended. No new claims have been added. As a result claims 1-3 and 5-17 are pending for examination with claim 1 being the sole independent claim. No new matter has been added. Support for the amendment to claim 1 can be found at least in claim 4 as originally filed and in the specification on page 5, lines 18-22.

Rejections Under 35 U.S.C. §102

1. The Office Action rejects claims 1-3, 7-9, 12 and 13 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,231,539 to Inoue et al. (hereinafter "Inoue"). Applicants respectfully disagree and assert that claim 1 as amended herein is patentable in view of Inoue at least because Inoue fails to describe anything concerning "the communication portion of the valve member body portion being a concave portion formed in the side portion of the valve member body portion," as originally presented in claim 4 and now recited in claim 1.

The Office Action indicates, and Applicants agree, that Inoue fails to disclose a "communication portion of the valve to be concave." (Office Action at pages 2-3.) Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b) of claim 1 and claims 2, 3, 7-9, 12 and 13 which depend therefrom is respectfully requested.

Rejections Under 35 U.S.C. §103

2. The Office Action rejects claims 4-6 under 35 U.S.C. §103(a) as being unpatentable over Inoue in view of U.S. Patent No. 5,624,395 to Mikhail et al (hereinafter "Mikhail"). As mentioned above, claim 4 is canceled herein and the features originally recited in claim 4 are now recited in claim 1. Applicants respectfully assert that claim 1 is patentable in view of the combination of Inoue and Mikhail, at least, because Mikhail also fails to teach or suggest "the communication portion of the valve member body portion being a concave portion formed in the side portion of the valve member body portion," as now recited in claim 1.

The teachings of Mikhail are directed to a "valve member 38 [that] defines three

arcuately curved valve openings 76 cut entirely through the surface thereof” that open when “the valve wall 40 is squeezed radially inward.” (Col. 11, line 58 to col. 12, line 1.) Mikhail also teaches that the valve includes a concave surface 72. However, the mere mention of a concave surface fails to teach or suggest anything about “a concave portion formed in the side portion of the valve member body portion,” as recited in claim 1. (Emphasis added.) Further, Mikhail fails to teach or suggest anything about a valve member body. Accordingly, claim 1 is allowable because the combination of Inoue and Mikhail fail to teach or suggest all the limitations of claim 1 for at least the reasons described above.

The Office Action alleges that “it would have been obvious ... to modify the device of Inoue to have a concave valve forming hemispherical cavity as taught by Mikhail.” Office Action at page 3. Applicants respectfully assert that Fig. 1 of the application illustrates a “concave portion 311 provided in the [side portion] of the valve member 3” that is not taught or suggested by the combination of Inoue and Mikhail because neither Inoue nor Mikhail teach or suggest anything about the concave portion formed in the side portion of the valve member body. (Specification at page 5, lines 15-17.) As a result, neither Inoue nor Mikhail teach or suggest anything about a fluid control device that operates in the manner of the “fluid control device” recited in claim 1.

For example, claim 1 as amended herein also recites “a hollow cavity portion which communicates with said communication portion, wherein at least an outer edge portion of said hollow cavity portion sits on the inner wall face of said housing portion ... [and] allows fluid flow above a predetermined fluid pressure in such a way that the outer edge portion sitting on the inner wall face of said housing portion is deformed by the fluid pressure towards the hollow portion, thus producing a gap between the edge portion and a base of the hollow portion.” (Emphasis added.) Accordingly, the deformation of a surface to open one or more slits, as described in Mikhail, fails to teach or suggest anything about the a “hollow cavity portion” that “allows fluid flow” as recited in claim 1. Further, the “beaklike nonreturn valve 52c” taught by Inoue also fails to teach or suggest anything about the “hollow cavity portion” recited in claim 1 because the nonreturn valve of Inoue does not provide any deformation of an “outer edge portion” as recited in claim 1. (Col. 10, lines 48-57 and Fig. 6.)

For all of the above reasons, claim 1 is allowable in view of the combination of Inoue and Mikhail. Claims 5 and 6 depend either directly or indirectly from allowable independent claim 1. Accordingly, reconsideration and withdrawal of the rejection of claims 4-6 under 35 U.S.C. §103(a) over Inoue in view of Mikhail of is respectfully requested.

3. The Office Action rejects claim 14 under 35 U.S.C. §103(a) as being unpatentable over Inoue. As described above, claim 1 as amended is allowable in view of Inoue. Claim 14 depends from allowable claim 1. Accordingly, reconsideration and withdrawal of the rejection of claim 14 under 35 U.S.C. §103(a) over Inoue is respectfully requested.

4. The Office Action rejects claim 15 under 35 U.S.C. §103(a) as being unpatentable over Inoue in view of U.S. Patent No. 5,792,118 to Kurth et al. (hereinafter “Kurth”). As described above, claim 1 is allowable in view of Inoue. Claim 15 depends from allowable claim 1. Kurth fails to cure the deficiencies of Inoue. Accordingly, reconsideration and withdrawal of the rejection of claim 15 under 35 U.S.C. §103(a) over Inoue in view of Kurth is respectfully requested.

5. The Office Action rejects claims 16 and 17 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,290,681 to Brown (hereinafter “Brown”) in view of Inoue. Claims 16 and 17 depend either directly or indirectly from allowable claim 1. The Office Action indicates that Brown fails to teach the “valve of claim 1” and relies on Inoue for the alleged teaching. (Office Action at page 4.) As described above, claim 1 is allowable in view of Inoue. Accordingly, reconsideration and withdrawal of the rejection of claims 16 and 17 under 35 U.S.C. §103(a) over Brown in view of Inoue is respectfully requested.

Allowable Subject Matter

6. Applicants thank the Examiner for the identification of allowable subject matter in each of claims 10 and 11. The Office Action indicates that these claims are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in


independent form including all of the limitations of the base claim and any intervening claims. Applicants have deferred re-writing claims 10 and 11 in independent form in view of arguments provided herein regarding the patentability of the independent claim from which they depend.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

A petition and fee for a one month extension of time is included herewith. If this response is not considered timely filed in view of the petition and fee and if a request for an extension of time is otherwise absent, Applicants hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50/2762, Ref. No. J2000-7001US.

Respectfully submitted,
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